

WHAT IS CLAIMED IS:

- 1 1. A method for use in reestablishing a timing signal in a high frequency timing circuit after
2 the high frequency timing circuit has lost power, the method comprising:
3 (a) measuring the timing of a low frequency timing circuit against the timing of the high
4 frequency timing circuit before the high frequency timing circuit has lost power,
5 (b) using the low frequency timing circuit to measure time after the high frequency
6 timing circuit has lost power, and
7 (c) based on a time measurement obtained from the low frequency timing circuit, re-
8 establishing the timing signal at an appropriate time after the high frequency timing
9 circuit has regained power.
- 1 2. The method of claim 1, wherein measuring the timing of the low frequency timing circuit
2 comprises measuring how many cycles of the high frequency timing circuit occur after a
3 cycle of the timing signal begins and before a subsequent cycle of the low frequency
4 timing circuit begins.
- 1 3. The method of claim 1, wherein using the low frequency timing circuit to measure time
2 comprises measuring how many cycles of the low frequency timing circuit occur after the
3 high frequency timing circuit has lost power.
- 1 4. The method of claim 1, wherein re-establishing the timing signal comprises:
2 (a) first allowing the high frequency timing circuit to generate the timing signal after the
3 high frequency timing circuit has regained power, and
4 (b) repositioning the timing signal based upon the time measurement obtained from the
5 low frequency timing circuit.

- 1 5. The method of claim 1, wherein reestablishing the timing signal comprises:
2 (a) first using the low frequency timing circuit to reapply power to a high frequency
3 oscillator that drives the high frequency timing circuit, and then
4 (b) using the low frequency timing circuit and a signal from a high frequency oscillator
5 to generate a synchronization pulse that aligns the high frequency timing signal.

- 1 6. An electronic device comprising:
2 (a) a high frequency timing circuit configured to produce a timing signal,
3 (b) power-down circuitry configured to remove power temporarily from the high
4 frequency timing circuit,
5 (c) a low frequency timing circuit configured to measure time after the high frequency
6 timing circuit has lost power,
7 (d) calibration circuitry configured to measure the timing of the low frequency timing
8 circuit against the timing signal before the high frequency timing circuit has lost
9 power, and
10 (e) control circuitry configured to receive a time measurement from the low frequency
11 timing circuit and reestablish the timing signal at an appropriate time after the high
12 frequency timing circuit has regained power.

- 1 7. The electronic device of claim 6, wherein the calibration circuitry includes counting
2 circuitry configured to measure how many cycles of the high frequency timing circuit
3 occur after a cycle of the timing signal begins and before a subsequent cycle of the low
4 frequency timing circuit begins.

- 1 8. The electronic device of claim 6, wherein the calibration circuitry includes circuitry
2 configured to count a high frequency oscillator beginning on a certain cycle of a low
3 frequency oscillator, and to produce a synchronization pulse after a certain number of
4 cycles of a high frequency oscillator have elapsed.

1 9. The electronic device of claim 6, wherein the low frequency timing circuit includes
2 counting circuitry configured to maintain a continuous count of low frequency clock
3 cycles after the high frequency timing circuit has lost power.

1 10. The electronic device of claim 6, wherein the control circuitry is configured to:
2 (a) allow the high frequency timing circuit to generate the timing signal after regaining
3 power, and then
4 (b) reposition the timing signal based upon the time measurement obtained from the low
5 frequency timing circuit.

1 11. The electronic device of claim 6, wherein the control circuitry is configured to:
2 (a) first using the low frequency timing circuit to reapply power to a high frequency
3 oscillator that drives the high frequency timing circuit, and then
4 (b) using the low frequency timing circuit and a signal from a high frequency oscillator
5 to generate a synchronization pulse that aligns the high frequency timing signal.

1 12. The electronic device of claim 6, further comprising means for automatic recovery of
2 time, day and date information from a base station.